# Appendix G

# Federal Agency Responsibilities Applicable to Invasive Species

*An Initial Survey of Aquatic Invasive Species Issues in the Gulf of Mexico Region*

Invasive Species Focus Team
Gulf of Mexico Program

Version 4.0

# Roles and Responsibilities of Federal Agencies With Respect to Invasive Species

*This appendix was excerpted from Corn et al. 1999.*

## Department of Agriculture

At least six separate agencies of the U.S. Department of Agriculture (USDA) have responsibilities related to nonindigenous species.

**Agricultural Research Service (ARS)**

ARS provides scientific and technical support for other USDA agencies, among them Agricultural Plant Health Inspection Service. Such support has focused on detection technology for ports of entry, systematics for rapid identification of invading species, and pesticide application technology. ARS conducts research on biologically based pest management programs at more than 40 locations, involving more than 200 researchers and expending more than $100 million annually. In addition, ARS helps monitor target pests of integrated pest management programs (e.g., ground, aerial, and satellite monitoring of leafy spurge and other weed species). ARS operates grazing lands research at 16 locations where restoration is an element.

**Animal and Plant Health inspection Service (APHIS)**

Through an agriculture quarantine inspection program conducted at 178 U.S. ports of entry, APHIS conducts pre-clearance activities, permit decisions, treatment efforts, detection surveys, and eradication efforts to prevent the introduction of specific foreign pests that would threaten U.S. agricultural production and natural ecosystems. Significant foreign pests include insects, plant and animal diseases, mollusks, mites, and invasive plants. Domestically, APHIS cooperates with federal and state agencies as well as non-governmental organizations to detect, contain, and eradicate infections of selected foreign pests before they become well-established and spread. APHIS may use integrated management approaches including biological control to address widespread insects, diseases, and selected weeds that cannot otherwise be eradicated.

Under agency interpretations of the National Environmental Protection Act (NEPA), APHIS may approve and issue permits for importing nonindigenous species (7 CFR 372.5(b)(4)) following preparation of an environmental assessment rather than an environmental impact statement. Permits for importing nonindigenous species into containment facilities (7 CFR 372.5(c)(3)(iii)(A)) and for interstate movement of nonindigenous species between containment facilities (7 CFR 372.5(c)(3)(iii)(B)) are categorically excluded by the agency from NEPA requirements.

In 1997, APHIS initiated the "Campaign Against Non-Native Invasive Species: A Strategy for the Nation." The purpose of this strategy are to: (1) set national goals and direction for addressing non-native invasive species issues and concerns; (2) identify federal actions; (3)

develop a comprehensive, coordinated federal approach; and (4) raise the profile of nonindigenous species issues and problems and emphasize prospective solutions.

**Cooperative State Research, Education, and Extension Service (CSREES)**

Although CSREES's National Research Initiative Competitive Grants Program does not currently identify' specific topics with a research focus on invasive species, several programs support research relevant to improving understanding of invasive species. In addition, other CSREES initiatives fund research on best management practices for cost-effective, environmentally safe control of invasive species using biological, chemical, cultural, and mechanical practices as well as invasive species management to maximize effective and cost-effective pest control and exclusion.

**Economic Research Service (ERS)**

ERS's work on non-native species focuses on developing decision-making tools for comparing the consequences of alien plant invasions with possible control costs. ERS considers both direct and indirect human costs of ecosystem disruptions as well as the costs and potential adverse consequences of alternative weed treatments.

**Farm Service Agency (FSA)**

In managing the Conservation Reserve Program, FSA requires all participants to control weeds (including noxious weeds), insects, pests, and other undesirable species on enrolled lands.

**U.S. Forest Service (USFS)**

The USFS conducts several research programs focused on invasive plant species, including ecological studies to support restoration of sites after treatment of exotic weeds as well as control of *Miconia sp*. and other invasive plants in Hawaii; kudzu in the southern United States; and yellow starthistle, spotted knapweed, and leafy spurge in Idaho. In addition, the USFS seeks to control and mitigate the impacts from non-native insects, such as the Asian long-horned beetle, gypsy moth, hemlock woolly adelgid, and browntail moth. The agency conducts disease research, such as to control butternut canker and to select trees genetically resistant to Dutch elm disease, pitch canker, and white pine blister rust.

## Department of Commerce

**National Oceanic and Atmospheric Administration (NOAA)**

NOAA's involvement with nonindigenous species originates from its role in the management of the Great Lakes and coastal resources. NOAA has conducted much of the federal research and funded much of the outside research on the zebra mussel. The agency also co-chairs the Aquatic Nuisance Species Task Force.

NOAA has funded research in several program areas, including outreach to prevent and control invasions in marine environments, Chesapeake Bay ballast water management, and an economic evaluation of the costs of non-native species. Under the National Invasive Species Act, NOAA funds research on such topics as identifying pathways of introduction, developing cost-effective prevention methods, developing effective controls that minimize ecological damage, and identifying dispersal mechanisms of established species that might lead to

safeguards and protocols to prevent or slow the spread of nonindigenous species. NOAA's Great Lakes Environmental Research Lab has spent millions of dollars on research on invasive species impacts in the Great Lakes, focusing on zebra mussels. In addition, NOAA laboratories conduct research on introduced oyster diseases and shrimp viruses. NOAA also funds graduate student fellowships related to aquatic nuisance species research with an emphasis on training marine taxonomists.

Regulations for the Florida Keys National Marine Sanctuary define exotic species as any species of plant, invertebrate, fish, amphibian, reptile or mammal whose natural range would not have included the waters of the Atlantic Ocean, Caribbean, or Gulf of Mexico without passive or active introduction to such area through anthropogenic means (15 CFR 922.162(a)) and specifically prohibit introducing or releasing an exotic species of plant, invertebrate, fish, amphibian, or mammals into the Sanctuary (15 CFR 922.163(a)(7)).

Regulations implementing the Convention for the Conservation of Antarctic Marine Living Resources for the United States (50 CFR 300.1 12(d)(3)) authorize NOAA's Assistant Administrator to issue harvesting permits to U.S. vessels desiring to fish in Antarctic waters. However, the harvesting described in the application must not change or increase the risk of changing the marine ecosystem that is not potentially reversible within 2 to 3 decades, taking into account the state of available knowledge on the effect of the introduction of alien species. The aim is to make possible the sustained conservation of Antarctic marine living resources.

**National Sea Grant College Program**

This program funds research, education, and outreach to address threats from invasive species, with specific research supported on the biology and life history of non-native species; impacts of invasive species on ecosystems, including socioeconomic analysis of costs and benefits; control and mitigation options; prevention of new introductions; and reduction in the spread of established populations of non-native species.

## Department of Defense

The U.S. Department of Defense (DOD) engages in non-native species activities through development and implementation of the Navy's ballast water management policy; in partnership with the Armed Forces Pest Management Board and the National Wildlife Research Center, to control brown tree snakes chemically; and through maintenance of a noxious and nuisance plant management information system. A DOD Invasive Species Management Program seeks to prevent the entry of invasive species into the United States, to control invasive species present on DOD installations, and to restore DOD lands using native plants.

**U.S. Army Corps of Engineers (USACE)**

The USACE supports an aquatic plant control research effort within an Aquatic Plant Management Program as well as a zebra mussel research effort within Zebra Mussel Operations Management. In addition, the USACE is conducting a Chicago Channel Dispersal Barrier Study to determine effective measures to limit the dispersal of non-native species. The USACE also supports broader DOD initiatives described above.

## Department of the Interior

**Bureau of Land Management (BLM)**

The BLM focuses its non-native species efforts primarily on controlling invasive plants. BLM has implemented an action plan, Partners Against Weeds, as a strategy to prevent and control the spread of noxious weeds on public lands. In addition, BLM has instituted a Communication and Environmental Education Plan to help prevent and control the spread of noxious weeds on public lands. BLM has adopted specific policies to address weed infestation, and BLM's Director has identified invasive weeds as a top priority for the agency. Current BLM studies seek to address biological, chemical, and physical treatment protocols for invasive plants in the western United States. In addition, BLM is responsible for protecting and managing wild horses and burros which, although non-native, have been given a protected status. Furthermore, APHIS regulates animal pests on BLM land under a Memorandum of Understanding between APHIS and BLM.

BLM requires that non-native plant species be used on its grazing lands only in situations where native species are not available in sufficient quantities or are incapable of maintaining or achieving properly functioning conditions and biological health.

**U.S. Fish and Wildlife Service (USFWS)**

The USFWS focuses on efforts to prevent introductions and spread of invasive species and, where feasible and warranted, to control those species that have become established. Its authority to protect domestic ecosystems is indirect or general, and the agency sometimes finds itself at odds with other interests, particularly those wishing to introduce various species for sport fishing or hunting. Its broad authority under the Endangered Species Act gives it some authority if a proposed introduction of a non-native species or other activity seems likely to harm a species protected under the Act.

USFWS regulations (50 CFR 12.34(c)) concerning the seized or forfeited organisms prohibit the release of any live exotic species to the wild in the U.S. Such species may be returned to suitable habitat in (1) the country of export (if known) after consultation with and at the expense of the country of export, or (2) a country within the historic range of the species which is party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora after consultation with and at the expense of such country, if the organism is capable of surviving.

Under the Wild Bird Conservation Act, USFWS regulates (50 CFR Part 15) the management and imports of exotic birds, defined as any live or dead member of the Class Aves that is not indigenous to the 50 States or the District of Columbia, including any egg or offspring thereof, excluding domestic poultry, dead sport-hunted birds, dead museum specimens, dead scientific specimens, products manufactured from such birds, or birds in ten taxonomic families specified in the Act.

Under the Lacey Act, USFWS regulates (50 CFR Part 16) imports of "injurious" wildlife, with specific prohibitions noted for certain named species of mammals, birds, fish, mollusks, crustaceans, amphibians, and reptiles.

**Geological Survey (USGS)**

The Biological Resources Division of USGS focuses on researching factors influencing the invasion by non-native species and the effects of invasive species on ecosystem processes, native species, and landscape dynamics, especially on Department of the Interior lands. Through the National Biological Information Infrastructure, USGS facilitates documentation, dissemination, and integration of nonindigenous species information. USGS currently focuses on a small number of highly invasive species in the Great Lakes and eastern waterways and wetlands, riparian ecosystems, and Hawaii as well as invasive plants on western rangelands. USGS also manages the national Nonindigenous Aquatic Nuisance Species Database as well as several regional databases (e.g., Hawaii, Colorado plateau, and northern prairie).

**National Park Service (NPS)**

The NPS works to remove or control exotic species on NPS units, using fences to limit the movement of large exotic animals, as well as other techniques. More than 100 NPS units have specifically identified exotic species as significant resource management threats. In Florida, the NPS is cooperating with federal and state agencies to develop biocontrol agents for the melaleuca tree. The NPS is also experimenting with a SWAT team to seek out and eradicate small, localized infestations of exotic species.

The NPS has special regulations to minimize the potential for spreading zebra mussels and other aquatic nuisance species at the St. Croix National Scenic Riverway (36 CER 7.9), where the term aquatic nuisance species is defined as meaning the zebra mussel, purple loosestrife, and Eurasian watermilfoil.

The NPS regulates fishing on its lands (36 CFR 2.3(d)(2)) and prohibits the possession or use, in fresh waters, of live or dead minnows or other bait fish, amphibians, non-preserved fish eggs or fish roe, as bait for fishing, except in designated waters. Waters which may be so designated are limited to those where non-native species are already established, where scientific data indicate that the introduction of additional numbers or types of non-native species would not hurt populations of native species, and where park management plans do not call for elimination of non-native species.

**Office of Surface Mining Reclamation and Enforcement (OSM)**

The OSM, in certain situations, allows the use of introduced species in revegetating reclamation sites (30 CFR 715.20(b); 30 CFR 717.20(b); 30 CFR 816.111(b)(5); and 30 CFR 817.11 1(b)(5)), directing that introduced species be substituted for native species only if appropriate field trials have demonstrated that the introduced species are of equal or superior utility for the approved post-mining land use, or are necessary to achieve a quick, temporary, and stabilizing cover. Such species substitution must be approved by OSM. Introduced species must meet applicable state and federal seed or introduced species statutes, and must not include poisonous or potentially toxic species.

## Department of State

The Department of State engages in negotiations, international treaty activities, and regional and bilateral efforts related to invasive species, such as participation in bilateral efforts with

China to address the invasion of the Asian long-horned beetle, work with South Pacific countries to raise awareness of the need to control the spread of the brown tree snake, and negotiations in the International Maritime Organization to develop a treaty to address the introduction of invasive species through ballast water. Efforts of the Department of State focus on safeguarding biodiversity values and reducing ecological impacts, reducing economic impacts, managing trade and other economic consequences of actions taken to control invasive species, and reconciling the need to identify and restrict pathways of entry for invasive species with the necessity of maintaining human commerce.

## Department of Transportation

**U.S. Coast Guard (USCG)**

Under the Nonindigenous Aquatic Nuisance Prevention and Control Act the USCG is responsible for developing and implementing a ballast water management program to minimize the likelihood that invasive species can be transported to the United States in the ballast water of long-distance ocean vessels. Relevant regulations are published at 33 CFR Part 151, Subpart C.

**Federal Highway Administration (FHA)**

The FHA focuses primarily on vegetation management, including developing guidelines for combating roadside invasive species. Initiatives include dispersal of biocontrol research on purple loosestrife, and support of an inventory of invasive plant species and assessment of their spread rate on eastern roadsides.

## Independent Agencies

**Council on Environmental Quality**

The Council on Environmental Quality assists in formulating agency guidance in integrating issues involving non-native invasive species in the process of implementing NEPA.

**Environmental Protection Agency (USEPA)**

The USEPA completed a 1996 report entitled Generic Nonindigenous Aquatic Organisms Risk Analysis Review Process for use in reviewing proposed intentional introductions of aquatic species. In 1998, ecological risk assessment guidelines were developed, including a discussion of biological stressors, based on the 1996 report. With the Joint Subcommittee on Aquaculture, USEPA sponsored a workshop and developed a report on risks associated with shrimp viruses. USEPA developed a website publicizing the activities of the federal Aquatic Nuisance Species Task Force. USEPA wrote the draft guidance for use by states and interstate planning entities in developing management plans to qualify for federal funding under the authority of the Nonindigenous Aquatic Nuisance Prevention and Control Act. USEPA funded efforts by the USACE to design a nonindigenous species dispersal barrier for use in the Chicago Shipping and Sanitary Canal. Invasive species coordinators in USEPA Regional Offices advise the Regional Administrators on invasive species issues, such as regulation of ballast water discharges.

USEPA regulates introduced species by establishing criteria for the issuance of permits to operate aquaculture projects (40 CFR 125.1 1(a)(3)). USEPA requires that the applicant demonstrate, to the satisfaction of the USEPA Director, that if the species to be cultivated in the

aquaculture project is not native to the immediate geographical area, there will be minimal adverse effects on the flora and fauna indigenous to the area, and the total commercial value of the introduced species is at least equal to that of the displaced or affected indigenous flora and fauna.

**National Science Foundation**

The National Science Foundation funds basic and applied research on invasive species, including their roles in population and ecological processes, their relationship to biological conservation activities, and their role as a disturbance agent in ecosystems.

**Smithsonian Institution**

Research by the Smithsonian Institution often addresses the pattern, impact, and management of alien species invasions. Programs at the Smithsonian Environmental Research Center (SERC) measure the patterns of transfer, invasion, and impact of alien species on coastal marine and estuarine systems. Specific projects test methods to reduce the risk of species transfer in ship ballast water; document the history of alien species invasions for Chesapeake Bay; analyze alien species transfer and invasion patterns in Prince William Sound (AK) and Indian River Lagoon (FL); establish a national database on nonindigenous marine and estuarine species; initiate surveys to measure rates and patterns of invasion in selected coastal regions; and implement studies to quantify the ecological and economic impacts of alien species. SERC also cosponsors workshops and symposia on invasive species. In cooperation with the USCG, SERC established the National Ballast Water Information Clearinghouse to measure the changing patterns of ballast water delivery and management for vessels arriving in U.S. ports and to synthesize national data on patterns and impacts of alien species in coastal ecosystems. Systematists at the Smithsonian's National Museum of Natural History assist in the detection and identification of many alien species.

## Interagency Efforts

**Federal Interagency Committee for Management of Noxious and Exotic Weeds**

This Committee is composed of various agency representatives from the Departments of Agriculture, the Interior, Transportation, Defense, and Energy. The Committee fosters cooperative work on integrated ecological approaches to management of noxious and exotic weeds on federal lands and provides technical assistance on private lands. Recent accomplishments include publication of a weed fact book, “Invasive Plants: Changing the Landscape of America,” the document “Pulling Together: National Strategy for Invasive Plant Management,” and documentary video on the problem of noxious and exotic weeds.